

## REMARKS

In the Office Action dated April 23, 2003, the Examiner indicated that he did not find Applicants' arguments in the March 21, 2003 Response to be persuasive and substantially repeated the rejections from the December 4, 2002 Office Action. Specifically, the Examiner (i) objected to claim 28 for being dependant on a canceled claim; (ii) rejected claims 1, 2, 5, 7, 8, 36, and 37 under 35 U.S.C. § 102(b); (iii) rejected claims 3, 4, 6, 8-26, 28-30, 32-35, and 38-44 under 35 U.S.C. §103(a); and (iv) provisionally rejected claims 1-24, 26, 28-30, and 32-44 under the judicially created doctrine of obvious-type double patenting. Applicants have amended claims 1, 11, 24, 28, and 36 to provide clarification and correct errors. No new matter has been added. Further, Applicants have canceled claim 39.

Applicants respectfully traverse the claim rejections and request reconsideration. Further, to the extent the Examiner relies on common knowledge in the art for the § 103(a) rejections, Applicants respectfully request the Examiner to provide references supporting his position. (See M.P.E.P. § 2144.03.)

### **I. Claim Objections**

The Examiner objected to claim 28 because it depends on canceled claim 27. Applicants have amended claim 28 to depend from claim 24. In light of the above, Applicants respectfully request withdrawal of the objection.

## **II. Claim Rejections under 35 U.S.C. §102(b)**

The Examiner rejected claims 1, 2, 5, 7, 8, 36, and 37 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,634,086 ("Rtischev"). Applicants respectfully traverse these rejections.

In amended claim 1, Applicants recite an intelligibility measurement system, which includes a means for hearing a speaker who is repeating items, a means for preparing a transcription of what was heard by the means for hearing, a means for comparing the items with the transcription, and a means for measuring intelligibility. Similarly, in amended claim 36, Applicants recite an intelligibility measurement system that includes a speaker that provides a response by repeating items, a listener that provides a repetition of what the listener heard when listening to the speaker repeating the items, a database that contains speaker responses, items, and listener repetitions, and a nonlinear model operable to provide an intelligibility estimate of the speaker's intelligibility by comparing the items and the listener repetitions contained in the database. Intelligibility is the degree to which others can understand a person's speech. (See, e.g., Applicants' specification, page 2, lines 12-13). Accordingly, the focus of the intelligibility measurement system is on a listener's ability to understand the speaker.

Applicants respectfully disagree that Rtischev teaches a system for measuring intelligibility. Rtischev teaches a system for voice-interactive language instruction that produces a reading quality score. (See, e.g., Rtischev, Abstract.) The speech recognizer recognizes reading errors as well as incorrect answers, while tolerating strong foreign accents. (See, e.g., Rtischev, Abstract.) Additionally, the system is able to recognize and respond accurately and in a natural manner to scripted speech, despite poor user

pronunciation, pauses, and other deficiencies. (See, e.g., Rtischev, column 3, lines 18-21.) Further, the system is designed to provide significant latitude with respect to the quality of the user's pronunciation as compared to models in the speech recognizer. (See, e.g., Rtischev, column 5, lines 12-17.)

As taught by Rtischev, a speaker receives a reading quality score based on the speaker's ability to read the items, not on how well the speaker pronounced the items. Accordingly, the reading quality score does not provide an intelligibility measurement. Specifically, Rtischev does not teach at least the elements of preparing a transcription of what was heard (i.e., by a listener) and comparing the items with the transcription to provide an intelligibility estimate. Because Rtischev does not teach all the elements of claims 1 and 36, Rtischev does not anticipate claims 1 and 36.

Claims 2, 5, 7, and 8 depend from claim 1. Claim 37 depends from claim 36. Accordingly, Applicants also submit that Rtischev does not anticipate claims 2, 5, 7, 8, and 37.

In light of the above, the Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 102(b).

### **III. Claim Rejections under 35 U.S.C. §103(a)**

The Examiner rejected claims 3, 4, 6, 8, 11-18, 24, 26, 28-30, 32, 33, 42, and 44 as being obvious in light of Rtischev. Applicants respectfully traverse these rejections.

In amended claim 11, Applicants recite an intelligibility measurement system that includes a measurement unit operable to determine an intelligibility score of a speaker by comparing the items with a transcription of what a listener hears when the speaker repeats

the items. Similarly, in amended claim 24, Applicants recite a method of measuring intelligibility that includes determining an intelligibility score of the speaker by comparing the items with a transcription of what the listener hears when listening to responses from the speaker. As previously discussed, Rtischev does not teach a means for preparing a transcription of what was heard by the listener and comparing the items with the transcription to provide an intelligibility estimate.

The Office Action states that it is well known in the art to have teachers listen to speakers so as to evaluate the intelligibility of their speech in terms of reading errors. However, the Office Action's statement of what is well known in the art does not overcome the deficiencies in Rtischev. Because the combination of Rtischev and common knowledge does not suggest each and every element of claims 11 and 24, claims 11 and 24 are not obvious in light of the combination of Rtischev and common knowledge.

Claims 3, 4, 6, and 8 depend from claim 1. Claims 12-18 and 42 depend from claim 11. Claims 26, 28-30, 32-33, and 44 depend from claim 24. Accordingly, Applicants also submit that claims 3, 4, 6, 8, 12-18, 26, 28-30, 32-33, 42, and 44 are not obvious in light of Rtischev.

The Examiner rejected claims 9, 10, 19, 20-23, 25, 34, 35, 38-41, and 43 as being obvious in light of Rtischev in view of U.S. Patent No. 5,059,127 ("Lewis"). Applicants have canceled claims 25 and 39.

In claim 21, Applicants recite an intelligibility measurement system that includes a measurement unit operable to determine an intelligibility score of a speaker by comparing words repeated by a speaker with a transcription of what the listener hears. As previously discussed, Rtischev does not teach a means for preparing a transcription of what was heard

by the listener and comparing the words with the transcription to provide an intelligibility estimate. Lewis fails to overcome the deficiencies of Rtischev.

Lewis describes a computerized mastery testing system providing for the computerized implementation of sequential testing in order to reduce test length without sacrificing mastery classification accuracy. (See, e.g., Lewis, Abstract.) However, mastery testing is used to decide if an individual has attained a specified level of knowledge, not to determine the intelligibility of the individual's speech. (See, e.g., Lewis, column 1, lines 19-23.) Neither Rtischev nor Lewis suggests determining an intelligibility score of a speaker using a transcription of what the listener hears and comparing the words with the transcription. Accordingly, claim 21 is not obvious in light of the combination of Rtischev and Lewis.

Claims 9-10 and 41 depend from claim 1, claims 19-20 depend from claim 11, claims 22-23 and 43 depend from claim 21, claims 34-35 depend from claim 24, and claims 38-40 depend from claim 36. Accordingly, Applicants also submit that claims 9-10, 19-20, 22-23, 34-35, 38-41, and 43 are not obvious in light of the combination of Rtischev and Lewis.

In light of the above, Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 103(a).

#### **IV. Claim Rejections under Obvious-type Double Patenting**

The Examiner provisionally rejected claims 1-24, 26, 28-30, and 32-44 under the judicially created doctrine of obvious-type double patenting as being unpatentable over Claims 1-3, 5-9, and 11-15 of co-pending Application No. 09/311,617 ("Townshend").

Applicants have canceled claim 39. Applicants respectfully traverse the remaining double patenting rejections.

Townshend describes a method and apparatus for providing automatic language assessment using speech recognition and a scoring computational model that accounts for the accuracy of a speech recognition system. (See, e.g., Townshend, page 6, lines 4-6.) However, Townshend does not suggest or claim a method or apparatus for measuring intelligibility of a speaker by comparing items with a transcription of what a listener hears. Because Townshend does not suggest or claim a method or apparatus for measuring intelligibility, Applicants' claims are not obvious from Townshend's claims 1-3, 5-9, and 11-15.

### **CONCLUSION**

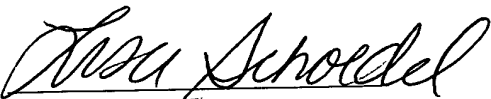
In light of the above amendments and remarks, Applicants submit that the present application is in condition for allowance and respectfully request notice to this effect. The Examiner is requested to contact Applicants' representative below if any questions arise or if she may be of assistance to the Examiner.

Respectfully submitted,

**Ordinate Corporation**

Date: October 23, 2003

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